General Description

The following sections briefly describe the contents of the three downloadable workbook files (in several file formats) containing the soil data collected from sites in the FROSTFIRE experimental burn. The format of data on each workbook is the same within files: each file is divided into four spreadsheets (Preburn-USGS, Preburn-USFS, Postburn-1999, and Postburn-2000). Unavailable or inapplicable data is indicated by a dash ("-"). Additional information on these sites as well as sampling and analyses procedures can be found in the main text of the U.S. Geological Survey Open-File Report 2011–1216 that this file accompanies.

of2011-1216_Physical

This table contains data such as bulk density, volumetric water content, and, if submitted, particle size.

Sample ID	Sample identification: This ID gives information about the site, plot, and depth of the sample. For more information see the main text.
Depth	Indicates the basal depth, in cm, of sampling increment.
Field Horizon Code	Horizon type of the sample, as defined in the field. Horizon code definitions are found in Table 2 of the main text.
Sample Description	A brief description of the sample.
Date Sampled	Date during which the sample was taken (usually month/day/year).
Thickness	Thickness of the horizon, in cm.
>2 mm in sample	Dry weight percent of soil particles not passing through a 2 mm sieve after gentle crushing.
>1 cm in sample	Dry weight percent of roots larger than 1 cm in diameter in the sample.
Bulk Density (<2 mm)	Grams of oven-dried soil per cubic centimeter, with soil particles greater than 2 mm and roots greater that 1 cm diameter removed. Calculated by multiplying the air-dry bulk density (<2 mm) by (1 – fraction moisture in air-dry sample). No volume adjustment has been made for the fractions removed.
Total Bulk Density	Grams of oven-dried soil per cubic centimeter for the entire soil sample with the weight of particles greater than 2 mm and roots greater than 1 cm diameter included. Calculated by multiplying the air-dry bulk density by (1 – Moisture in AD Sample).
Vol. Fld. Moisture	Volumetric Field Moisture: The percent water in the sample, by volume.
Moisture in AD Sample	Percent, by weight, of moisture remaining in a sample after air-drying to constant weight as determined by subsequently oven-drying the sample. Can be used to convert between air-dry and oven-dry carbon or nitrogen content using the following equation: $X_{ovendry} = X_{airdry} * (1 – (\text{Moisture in AD sample}/100))$, where X is either percent carbon or percent nitrogen.

Height above mineral	Height of each basal depth above the mineral soil boundary in centimeters. Therefore, the bottom organic layer is at zero and all mineral horizons are negative numbers. If the depth of mineral soil is unknown this field can not be calculated.

of2011-1216_Chemistry

Sample ID	Sample identification: This ID gives information about the site, plot, and depth of the sample. For more information see the main text.
Depth	Indicates the basal depth, in cm, of sampling increment.
Field Horizon Code	Horizon type of the sample, as defined in the field. Horizon code definitions are found in Table 2 of the main text.
Sample Description	A brief description of the sample.
Carbon (AD basis)	Percent by weight of carbon in an air dried soil sample with material >2 mm and/or 1 cm diameter removed. Measured value for all data except those found on Preburn-USFS tab. Can be converted to oven-dry carbon content using the following equation: $C_{ovendry} = C_{airdry}$ * (1 – (Moisture in AD sample/100)).
Nitrogen (AD basis)	Percent by weight of nitrogen in an air dried soil sample with material >2 mm and/or 1 cm diameter removed. Measured for all data except those found within Preburn-USFS tab. Can be converted to oven-dry nitrogen content using the following equation: $N_{ovendry} = N_{airdry}$ * (1 – (Moisture in AD sample/100)).
Carbon (OD basis)	Percent by weight of carbon in an oven-dried soil sample with material >2 mm and/or 1 cm diameter removed. A calculated value for all data except those found within the Preburn-USFS tab.
Nitrogen (OD basis)	Percent by weight of nitrogen in an oven-dried soil sample with material >2 mm and/or 1 cm diameter removed. A calculated value for all data except those found within the Preburn-USFS tab.
$\delta^{13}C$	Per mil (‰) value of $\delta^{13}C$ relative to Pee Dee Belemnite.
Fraction Modern	The deviation of the $^{14}C/^{12}C$ ratios of a sample from "Modern". See main text for more information.
$\Delta^{14}C$	Per mil (‰) value of $\Delta^{14}C$.
+/- $\Delta^{14}C$	Error associated with $\Delta^{14}C$ value.
LOI	Percent of organic material lost on ignition. See main text for more information.
Na_2O	Percent by weight of sodium oxide in a soil sample with material >2 mm or 1 cm diameter removed.

K_2O	Percent by weight of potassium oxide in a soil sample with material >2 mm or 1 cm diameter removed.
CaO	Percent by weight of calcium oxide in a soil sample with material >2 mm or 1 cm diameter removed.
MgO	Percent by weight of magnesium oxide in a soil sample with material >2 mm or 1 cm diameter removed.
MnO	Percent by weight of manganese oxide in a soil sample with material >2 mm or 1 cm diameter removed.
Fe_2O_3	Percent by weight of iron (III) oxide in a soil sample with material >2 mm or 1 cm diameter removed.
Al_2O_3	Percent by weight of aluminum oxide in a soil sample with material >2 mm or 1 cm diameter removed.
SiO_2	Percent by weight of silicon oxide in a soil sample with material >2 mm or 1 cm diameter removed.
P_2O_5	Percent by weight of phosphorus pentoxide in a soil sample with material >2 mm or 1 cm diameter removed.
TiO_2	Percent by weight of titanium oxide in a soil sample with material >2 mm or 1 cm diameter removed.
Ba	Parts per million of barium in a soil sample with material >2 mm or 1 cm diameter removed.
Sr	Parts per million of strontium in a soil sample with material >2 mm or 1 cm diameter removed.
Hg	Parts per million of mercury in a soil sample with material >2 mm or 1 cm diameter removed.

of2011-1216_Transects

This file contains the field descriptions of the individual horizons which make up the profiles sampled in bulk during the USGS pre-burn effort (see Preburn-USGS tabs of Physical and Chemical files). This file includes the following columns:

Sample ID	Sample identification: This ID gives information about the site, plot, and depth of the sample. For more information see the main text.
Depth	Indicates the basal depth, in cm, of sampling increment.
Field Horizon Code	Horizon type of the sample, as defined in the field. Horizon code definitions are found in Table 2 of the main text.
Sample Description	A brief description of the sample.
Roots	Root abundance and size using conventions of USDA-NRCS (Staff, 1998).

Munsell color (moist)	Color of moist soil based on the Munsell soil color chart.
Von Post or Texture	If organic soil, the classification using the von Post scale of humification (Damman and French, 1987). If mineral soil, the soil texture class following conventions of USDA-NRCS (Staff, 1998).
Height above mineral	Height of each basal depth above the mineral soil boundary. Therefore, the bottom organic layer is at zero and all mineral horizons are negative numbers.

Literature Cited

Damman, A.W.H., and French, T.W., 1987, The ecology of peat bogs of the glaciated Northeastern United States: A community profile: U.S. Fish and Wildlife Service 85(7.16), 100 p.

Staff, S.S., 1998, Keys to soil taxonomy (8th ed.): Blacksburg, Virginia, Pocahontas Press, Inc., 599 p.